

ABSTRACT OF THE DISCLOSURE

Nitramines are one of the more expensive and often the more plentiful ingredients found in energetic materials, such as solid rocket motor propellants, explosives, and pyrotechnics. By treating aluminized energetic material with an aqueous nitric acid solution containing not more than 55% by weight aqueous nitric acid at a weight ratio of aqueous nitric acid to energetic material of about 4:1 to about 6:1, most constituents of conventional aluminized energetic materials are digested into solution, with the exception of nitramines, which remain substantially insoluble in the aqueous nitric acid and can be recovered without requiring recrystallization of the nitramines. A mineral acid other than nitric acid, preferably hydrochloric acid, may be added to increase the rate of aluminum digestion. Treatment of the energetic material can be performed without volatile organic solvents, thus obviating ecological, cost, and safety concerns raised by the use of volatile organic solvents.

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